

TITLE: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (AS AMENDED)

INVENTOR'S NAME: Sachin Doshi, et al.

SERIAL NO.: 10/705,315 DOCKET NO.: 884.A59US1

REPLACEMENT SHEET

1/4

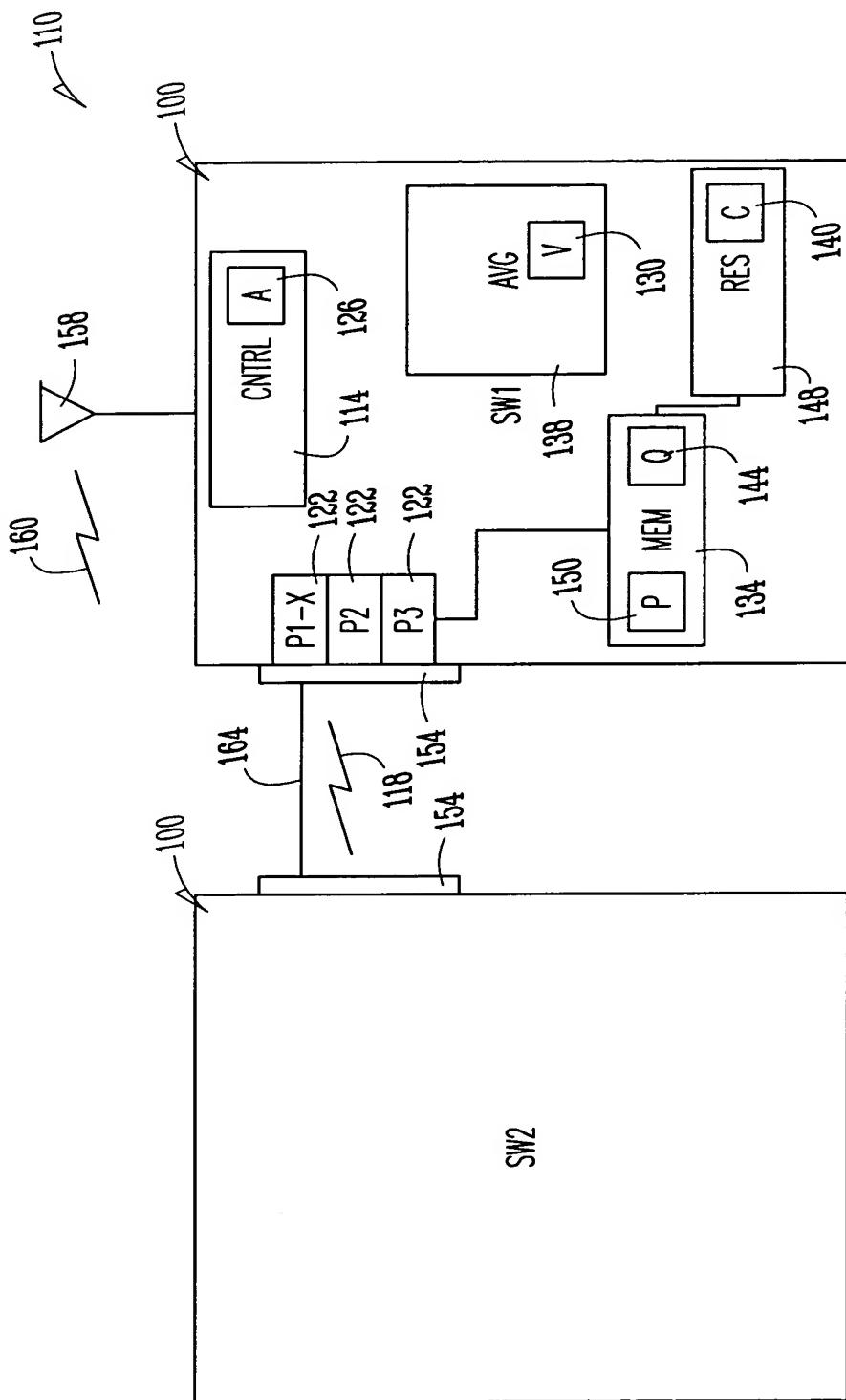


Fig. 1

2/4

211

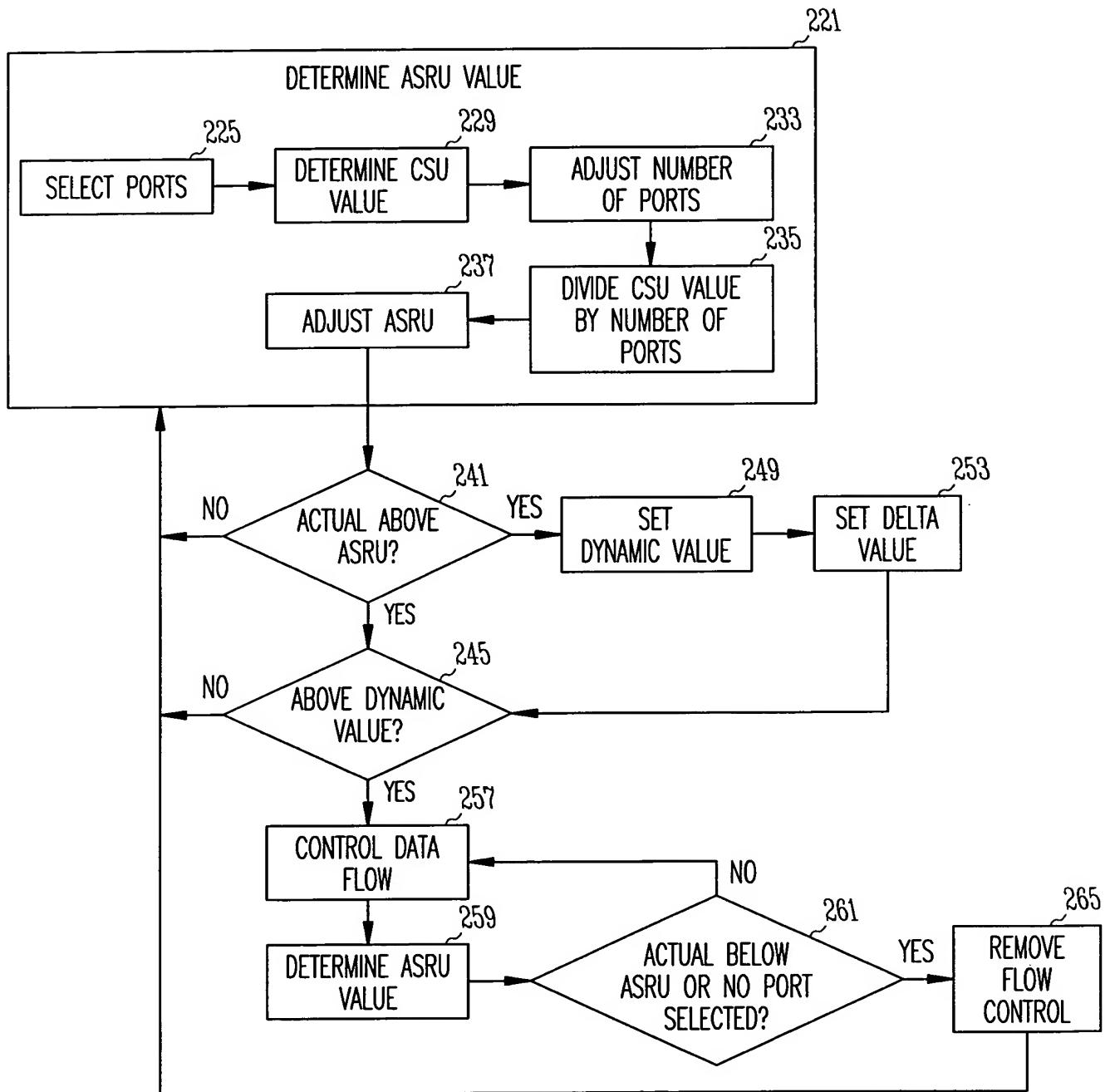


Fig.2

3/4

370

372 {  
 PortRxUsage = Per Receive port utilization of memory  
 PortRxSharedUsage = (PortRxUsage > Tpmin) ? (PortRxUsage -Tpmin):0  
 CumulativeSharedUsage = SUM (PortRxSharedUsage)  
 Delta Value = Function(port speed, overall resource usage)

if (CumulativeSharedUsage is greater than a memory level for which adaptive flow control is enabled) → 380

NumPortsInShared = count of all the ports which are using memory in shared space // Different speed ports are scaled accordingly. 10G is counted as 10 ports. This value is used to determine the average shared memory usage per 1G port.

AverageSharedUsage1G = [CumulativeSharedUsage / NumPortsInShared]  
 AverageSharedUsage10G = AverageSharedUsage1G \* 10  
 DynamicThresh1G = AverageSharedUsage1G + Delta value  
 DynamicThresh10G = AverageSharedUsage10G + Delta value  
 DynamicThresh1Gdown = DynamicThresh1G - Delta value  
 DynamicThresh10Gdown = DynamicThresh10G - Delta value

}

DynamicThresh = (Portspeed == 10G) ? DynamicThresh10G : DynamicThresh1G  
 DynamicThreshdown = (Portspeed == 10G) ?

DynamicThreshdown10G : DynamicThreshdown1G } 382

if (PortRxSharedUsage >= DynamicThresh) → 384

// this port is consuming more than the average

AssertFlowControl;

FlowControlTime = 16'hFFFF or

Function(PortRxSharedUsage - DynamicThresh)

}

else if (PortRxSharedUsage < DynamicThreshDown) or

(PortRxUsage <= Tpmin) → 386

// this port is no longer causing congestion

DeassertFlowControl;

}

Fig. 3

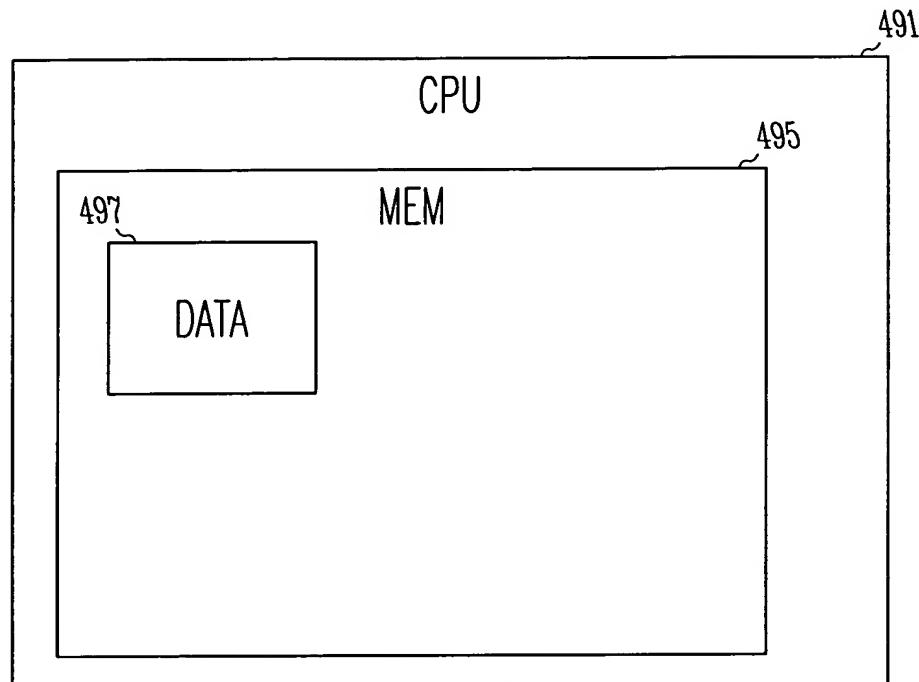
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4/4



*Fig. 4*